

NPDES Inspection Report

Permit # WA0002062

Puget Sound Naval Shipyard

Bremerton, WA

September 23, 2015

Prepared by:

Matt Vojik

**Environmental Protection Agency, Region 10
Office of Compliance and Enforcement
Inspection and Enforcement Management Unit**

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I. Facility Information

Facility Name: Puget Sound Naval Shipyard (PSNS) and Intermediate Maintenance Facility (IMF)

Facility Owner/Operator: U.S. Navy

Facility & Mailing Address: 1400 Farragut Ave
Bremerton, WA 98314-5001

Lat/Long: 47.56212°, -122.63729°

NAICS Codes: 336611, 928110

NPDES Permit: WA0002062

Facility Contacts: Michelle Aylward, NPDES Program Manager
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(Unless otherwise noted, all details in this inspection report were obtained from conversations with Michelle Aylward or from observations during the inspection.)

II. Inspection Information

Inspection Date: September 23, 2015

Inspectors: Matt Vojik, Inspector
EPA Region 10, OCE / IEMU
206-553-0716

| | |
|-----------------|--|
| Arrival Time: | 8:35 AM |
| Departure Time: | 3:30 PM |
| Weather: | Sunny |
| Purpose: | To determine compliance with NPDES Permit WA0002062 and the Clean Water Act. |

III. Permit Information

This facility is operating under NPDES Permit WA0002062. The permit became effective on April 1, 1994 and has been administratively extended since April 1, 1999. The last EPA inspection under this permit occurred on September 12, 2013. The facility has been under a Federal Facility Compliance Agreement (FFCA) since April 4, 2013.

IV. Background

The facility occupies about 350 acres located on the west side of the ferry terminal in Bremerton, WA. The shipyard is comprised of six dry docks, nine piers, four moorings and various industrial yards and buildings. Primary industrial activities involve the maintenance and dismantling of ships and submarines. The facility employs over 12,000 people. The Navy has owned and operated facilities at this location since 1891. In 1990, the Navy authorized a program to deactivate and recycle nuclear powered ships at the Puget Sound Naval Shipyard (PSNS).

The PSNS is organized into departments called codes, which have specific numerical designations. Code 106 is the Environment, Safety, and Health Office, which oversees NPDES compliance. Ms. Michelle Aylward has been the NPDES Program Manager since January 2014.

V. Inspection Entry

The facility prohibits visitors and staff from carrying devices with photographic or recording capabilities. Inspectors may arrange for the facility to provide a photographer during inspections. Photographs are released after they have undergone a security screening. Photographs of sensitive areas, such as radioactive material storage sites, may receive additional screening in Washington, DC. Inspectors should verify when and in what format the facility plans to release photographs to the EPA.

Prior to conducting an inspection, the facility also requests that inspectors submit a "Regulatory Personnel Certification Form." This information is used to create an individual security access badge that remains on file at the facility. The facility point of contact for security access badges is Patty Masino, Resource Manager (phone: 360-476-1971 / email: [[HYPERLINK "mailto:patty.masino@navy.mil" \]](mailto:patty.masino@navy.mil)).

This was an announced inspection. I called Ms. Aylward on Monday, September 21, 2015 and made arrangements to meet on the day of the inspection. I arrived at the facility at 8:35am on September 23, 2015 and met Ms. Aylward and her supervisor, Mr. Tony Thurman, at the ferry terminal. I presented my credentials to Ms. Aylward and Mr. Thurman and they escorted me to the employee parking lot so that I could store my cell phone, which was prohibited on base due to its built-in camera. The facility informed me that there was one photographer on duty on the day of the inspection and that he would be available after 11:00am. The photographer's availability did not affect the progress of the inspection. I was accompanied throughout the inspection by facility representatives. I was not denied access to the facility.

VI. Inspection Chronology

I began the inspection with an opening conference. I discussed the purpose and scope of the inspection. I then took a facility tour and conducted a cursory records review. I ended with a closing conference to discuss observations and next steps. Lists of attendees at the opening and closing conferences appear in **Attachment C**. The facility provided a CD of inspection photographs in a correspondence dated October 5, 2015, which appears in **Attachment D**.

VII. Owner and Operator Information

The facility is owned by the U.S. Navy.

VIII. Records Review

I conducted a cursory review of the following records:

- **Federal Facility Compliance Agreement (FFCA) Status Reports** – Facility representatives provided a summary of facility upgrades that have been completed and planned under the FFCA. The facility did not foresee problems obtaining funding authorization for the remaining upgrades under the FFCA.

In reference to item 13.d. of the FFCA, I asked if the facility has begun using copper-free paint on submarines. The facility explained that copper-free paint has been approved for some applications. The facility also indicated that copper-free paint has a much longer drying time (approximately 24 days) than standard paint (approximately two days).

- **Discharge Monitoring Reports (DMRs)** – Prior to the inspection, I reviewed the E90 report of exceedances that had been recorded since the last EPA inspection in September 2013. The data indicated that the facility exceeded effluent limits for total recoverable copper in each monitoring period from October 2013 to March 2014. After March 2014, the data shows one exceedance, which occurred in May 2015. A summary of this information appears under "Areas of Concern." During the inspection, I also reviewed lab reports and calculation spreadsheets associated with the DMRs.

- **Stormwater Pollution Prevention Plan (SWPPP)** – During the inspection, I conducted a cursory review of the SWPPP, dated March 2012 and last amended on March 16, 2015. The facility stated that the Naval Facilities Engineering Command (NAVFAC) was in the process of reviewing and updating the SWPPP, which occurs every three years. I also reviewed the following records associated with the SWPPP:
 - Site Inspection Records – Ms. Aylward explained that industrial areas (SWPPP Zones 4-9) are inspected on a monthly basis and non-industrial areas (SWPPP zones 1-3) are inspected on a quarterly basis.
 - Comprehensive Site Evaluation – Ms. Aylward explained that comprehensive site evaluations are conducted on an annual basis.
 - Training Logs – Ms. Aylward explained that the facility conducts annual computer-based training and publishes periodic stormwater information in the facility newsletter.
 - Spill Log – The spill log is maintained in a spreadsheet format.
- **Best Management Practices (BMP) Plan** – During the inspection, I reviewed the BMP Plan dated July 15, 2011.
- **Sediment Monitoring Reports** – The facility presented copies of sediment monitoring reports and explained that the reports consist of information compiled from CERCLA documents.
- **Dry Dock Inspection Records** – Ms. Aylward explained that the facility maintains weekly records of dry dock inspections.
- **Discharge Forms** – Ms. Aylward explained that the facility maintains a written internal authorization system for any proposed discharges to storm or sanitary sewer systems.

IX. Sampling and Analysis

According to Ms. Aylward, effluent samples are collected by the facility's chemistry lab every Tuesday.

In the time that she has been the NPDES program manager, Ms. Aylward said that there has been one surface water sampling event conducted under the facility's Environmental Investment (ENVVEST) Program. She said that Dr. Bob Johnston conducts additional surface water monitoring for internal quality assurance purposes, but this is no longer a commitment and may be dependent on funding in the future.

X. Facility Inspection

Ms. Aylward and Mr. Thurman took me on a tour of the facility. A site map appears in **Attachment A** and a photograph log appears in **Attachment B**.

We visited Dry Dock 3, where materials were being dismantled for recycling. I observed BMPs that included covered dumpsters and hand sweeping. I asked if the facility has considered using a vacuum sweeper instead of hand sweeping inside the dry docks. The facility said that tight spaces and uneven surfaces present challenges for vacuum sweeping inside the dry docks, but the operations division is testing a golf-cart sized vacuum sweeper for consideration.

The facility was also in the process of widening stormwater drainage channels along the perimeter of the dry dock to accommodate flow from a two-year storm event. Ms. Aylward explained that stormwater collected from inside the dry docks is directed to the sanitary sewer. When turbidity exceeds 100 NTU, a process water control system diverts stormwater to collection tanks and oily water treatment systems prior to discharging to the sanitary sewer. Sediment collected from the dry docks is taken to a landfill for disposal.

I also inspected Dry Dock 1, which was being used as a construction laydown area at the time of the inspection. I inspected Dry Dock 2 and Dry Dock 4, which contained submarines. I also inspected pump well #4, which is used to dewater Dry Dock 4. A combination of hydrostatic water and single-pass cooling water is discharged in batches from pump well #4 to outfall 018. On a monthly basis, pump well #4 alternates with pump well #5, which discharges to outfall 018A. The facility estimates flow according to pump capacity and pumping time.

I also inspected the sampling location for discharges from Dry Dock 6 (**Photo 1**). Ms. Aylward explained that plastic tubing was recently installed to replace old stainless steel piping at this sample port.

I inspected an oil/water separator, which treats stormwater collected in the vicinity of Pier B. Ms. Aylward said that the NAVFAC is responsible for maintaining all stormwater BMPs.

I also inspected a stormwater collection system at building 944, which is used as a less than 90 day accumulation area for hazardous waste. I noted that floor drains (**Photo 2**) are located under a roofed staging area (**Photo 3**) for hazardous waste. The facility explained that stormwater from the floor drains is pumped to a storage tank (**Photo 4**), which is drained in batches to the storm sewer system.

XI. Receiving Water

The facility is located on Sinclair Inlet on the Puget Sound.

XII. Areas of Concern

A. Discharge Limitation Exceedances

Section I.A.1.a. of the permit specifies discharge limitations for total recoverable copper.

Prior to the inspection, I reviewed a E90 report of exceedances that had been recorded since the last EPA inspection in September 2013. A summary of this information appears in the table below.

Table 1: Summary of Discharge Limitation Exceedances since September 2013

| Month | Outfall | Parameter Description | DMR Value | Limit Value | Limit Type |
|---------------|---------|---------------------------|-----------|-------------|------------|
| October 2013 | 018A | Copper, total recoverable | .64 | .44 lb/d | Average |
| October 2013 | 018A | Copper, total recoverable | 1.06 | .77 lb/d | Maximum |
| November 2013 | 018A | Copper, total recoverable | .026 | .019 mg/L | Average |
| November 2013 | 018A | Copper, total recoverable | .038 | .033 mg/L | Maximum |
| November 2013 | 018A | Copper, total recoverable | .87 | .44 lb/d | Average |
| November 2013 | 018A | Copper, total recoverable | 1.35 | .77 lb/d | Maximum |
| December 2013 | 018A | Copper, total recoverable | .028 | .019 mg/L | Average |
| December 2013 | 018A | Copper, total recoverable | .058 | .033 mg/L | Maximum |
| December 2013 | 018A | Copper, total recoverable | .97 | .44 lb/d | Average |
| December 2013 | 018A | Copper, total recoverable | 2.06 | .77 lb/d | Maximum |
| January 2014 | 018 | Copper, total recoverable | .81 | .77 lb/d | Maximum |
| January 2014 | 096A | Copper, total recoverable | .81 | .77 lb/d | Maximum |
| February 2014 | 018A | Copper, total recoverable | .5 | .44 lb/d | Average |
| March 2014 | 018A | Copper, total recoverable | .039 | .033 mg/L | Maximum |
| March 2014 | 018A | Copper, total recoverable | 1.62 | .77 lb/d | Maximum |
| May 2015 | 018A | Copper, total recoverable | .035 | .033 mg/L | Maximum |

B. Illicit Discharges

On June 3, 2015, the PSNS reported to the Department of Ecology via the Environmental Report Tracking System (#657232) that a voluntary sampling event on May 28, 2015 revealed fecal contamination in surface water. Via dye testing, the facility traced the contamination to building 457, where a restroom had been inadvertently plumbed to the storm sewer system. The facility estimated the rate of discharge from this illicit discharge to be approximately 500 gallons per day. This incident is also documented on Region 10's Citizen Complaint System under document number 00439204062015R10.

During the inspection, Mike Hardiman of NAVFAC explained that building 457 had been renovated a few years ago to install a full restroom in an area that had previously been equipped with showers only. It is unclear whether the showers had been plumbed to the storm sewer prior to the renovation.

I asked what mechanisms are in place to identify other cross-connections that may exist at the facility. Mr. Hardiman said that the storm sewer system was surveyed 10 years ago and the facility is considering conducting a new survey to verify sanitary sewer connections. The facility also requires contractors to obtain a utility connection permit as a means of verifying sewer connections and preventing similar mistakes during future projects. He also said that any contamination sources would be identified via the same

voluntary surface water monitoring program that helped identify the cross-connection in question.

I asked why it took multiple years to identify this cross-connection. Mr. Hardiman explained that the monitoring event on May 28, 2015 was conducted at low tide so the discharge was probably less diluted than during previous sampling events. Due to the length of time it took to identify the cross-connection via the facility's voluntary surface water monitoring program, I suggested that the facility consider additional methods for identifying illicit discharges.

After the inspection I noted in the compliance file that the facility also reported fecal contamination to the EPA on August 10, 2011, stating that "to date NAVFAC NW has been unable to locate cross connections or failures in either the storm or sanitary system that would explain the high fecal readings. These investigations are ongoing and will continue to assess the storm and sanitary systems to locate and isolate fecal sources."

On September 17, 2014, the PSNS also reported to the Department of Ecology via the Environmental Report Tracking System (#651627) that the facility discovered a broken wastewater pipe that had been leaking for three days, resulting in an illicit discharge of approximately 45,000 gallons. Additional information concerning this discharge appears in **Attachment D**.

C. Unreported Discharge Monitoring Results

Section IV.D. of the permit states that "if the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR."

During the inspection, I noted that a lab report dated August 10, 2015 documented a total recoverable copper concentration of 138 ug/L in an effluent sample collected for outfall 019 at Dry Dock 6. Although this concentration exceeds the permitted daily maximum limit of 0.033 mg/L, Ms. Aylward explained that the measurement was attributed contamination from the sample pipe, not the actual discharge. Ms. Aylward said that she consulted the facility's legal counsel and showed me typed notes documenting a phone call with Chae Park at the NPDES Compliance Unit. The notes documented the facility's notification to the EPA that this test result would not be included in the DMR because it was deemed unrepresentative of the discharge. Ms. Aylward stated that the facility was confident that the test result was unrepresentative because the sample was collected at a time when there was neither a rain event nor a vessel in the dry dock. After this incident, the sample pipe was replaced (**Photo 1**) with plastic tubing.

I recommended that the facility continue to carefully document and notify EPA of any future decisions to omit test results from DMRs due to unrepresentative sampling.

D. Potential Stormwater Run-On where Hazardous Waste is Handled

Section III.D.6.a. of the permit states that “in areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided. At a minimum, one of the following preventive systems or its equivalent shall be used: (1) Curbing, culverting, gutters, sewers or other forms of drainage control to prevent or minimize the potential for storm water run-on to come into contact with significant sources of pollutants; or (2) Roofs, covers or other forms of appropriate protection to prevent storage piles from exposure to storm water, and wind.

I noted that floor drains (**Photo 2**) are located under the roofed staging area (**Photo 3**) where hazardous waste is accumulated at building 944. Although this area is walled on three sides, stormwater can enter through the open entryway or through gaps at the base of the walls. Fluid from the floor drains is pumped to a storage tank (**Photo 4**), which is drained in batches to the storm sewer system.

I noted that a hazardous waste spill in this area could potentially come in contact with stormwater run-on, and if a spill entered a floor drain, it could commingle with stormwater in the storage tank. I suggested that the facility consider methods to further minimize the potential for stormwater to come into contact with hazardous waste in this area.

XIII. Closing Conference

I held a closing conference with facility representatives. A sign-in sheet of attendees appears in **Attachment C**. I discussed the areas of concern identified during the inspection and I gave a brief overview of the post-inspection process. I thanked everyone for their time and assistance with the inspection.

Mr. Stephen McKee, Code 106.3 Division Head, was out of the office, but participated in the closing conference via telephone. Mr. McKee also requested a copy of the final inspection report.

Report Completion Date:

Lead Inspector Signature:

December 30, 2015

ATTACHMENT A – Facility Site Map

ATTACHMENT B – Photograph Log

Puget Sound Naval Shipyard – WA0002062
PSNS Photographer: Jason Kaye
Camera Model: Canon EOS 5D Mark III
Date: September 23, 2015

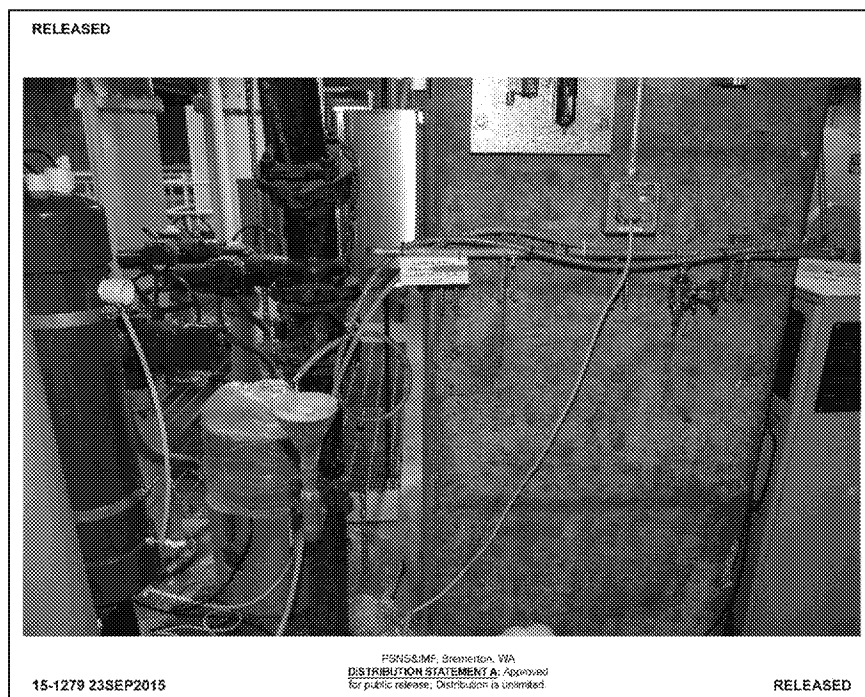


Photo 1 / 15-1279_RELEASED_JTK_001 – Sampling port for outfall 019 at Dry Dock #6. The facility recently replaced stainless steel piping with plastic tubing at this sample port.

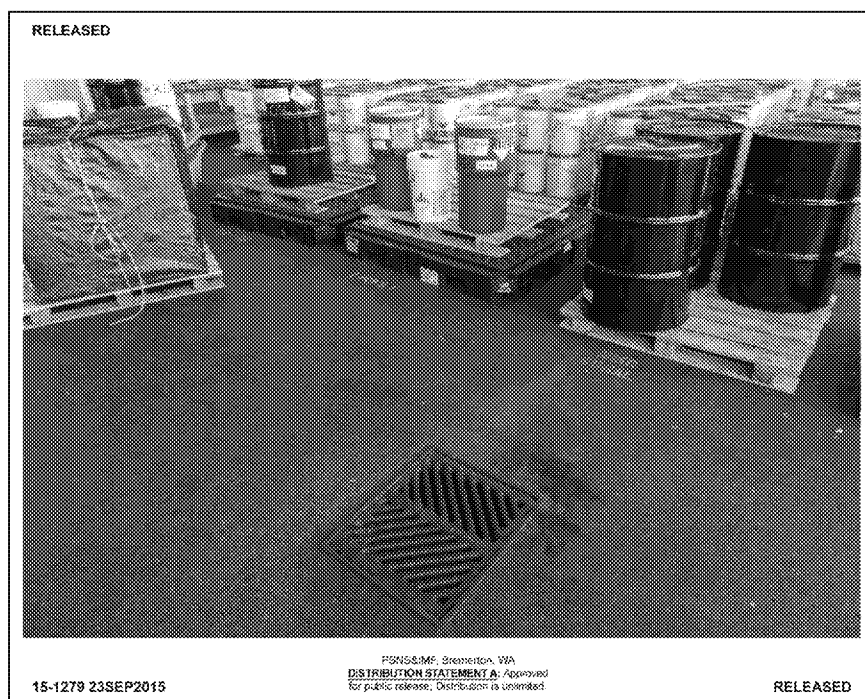


Photo 2 / 15-1279_RELEASED_JTK_004 – View of a floor drain in the hazardous waste staging area at building 944

Puget Sound Naval Shipyard – WA0002062
PSNS Photographer: Jason Kaye
Camera Model: Canon EOS 5D Mark III
Date: September 23, 2015

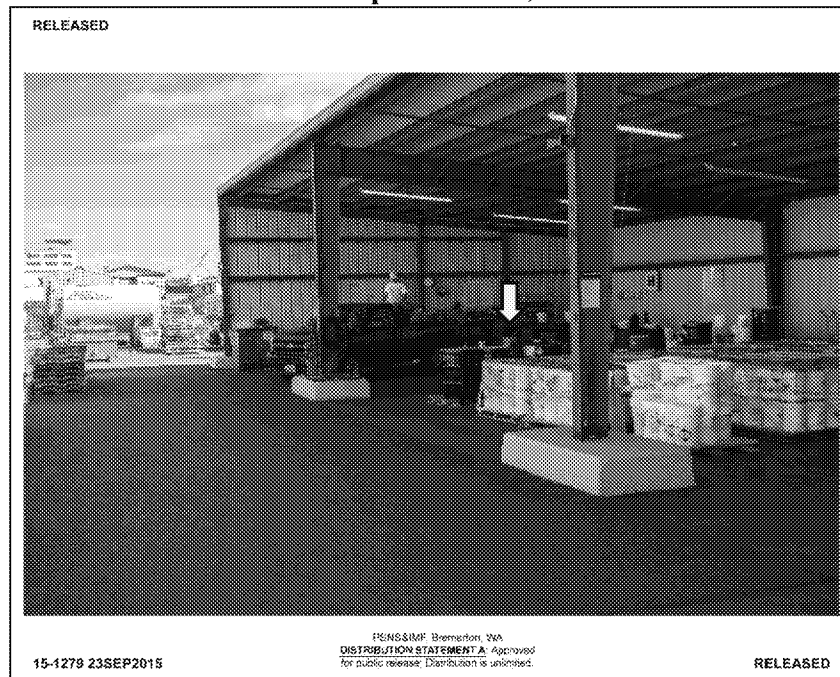


Photo 3 / 15-1279_RELEASED_JTK_002 – Southwesterly view of the hazardous waste staging area at building 944. The yellow arrow indicates the approximate location of the floor drain that appears in the previous photo. Stormwater is pumped from floor drains in this area to the “rainwater overflow tank” that appears in the background on the left and in the next photo.

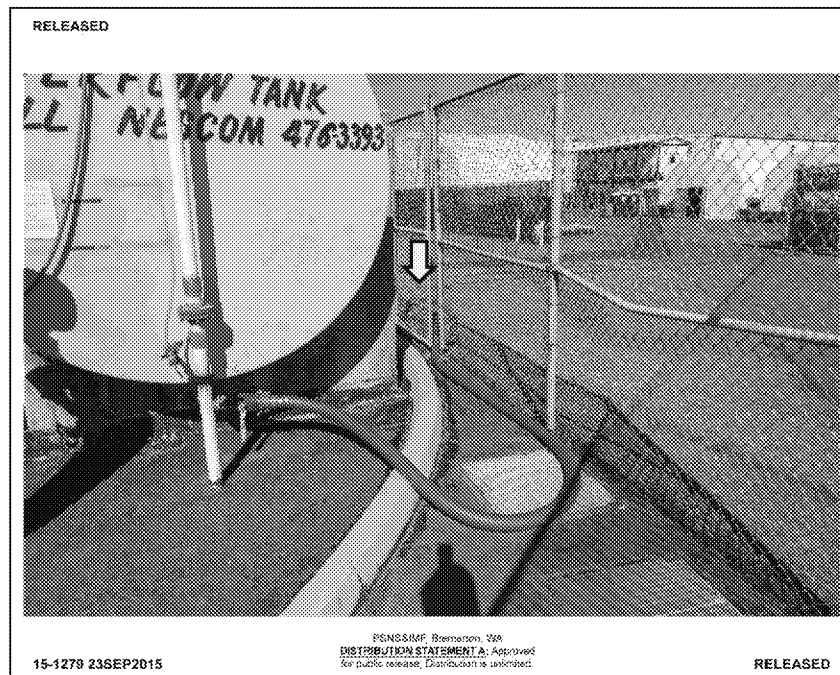


Photo 4 / 15-1279_RELEASED_JTK_003 – Westerly view of the “rainwater overflow tank” that appears in the previous photo. The tank is connected to a green hose that periodically discharges to a storm drain located outside the fenced area. The yellow arrow indicates the approximate location of the storm drain.

ATTACHMENT C – Sign-in Sheets

ATTACHMENT D – Discharge Reported on September 17, 2014